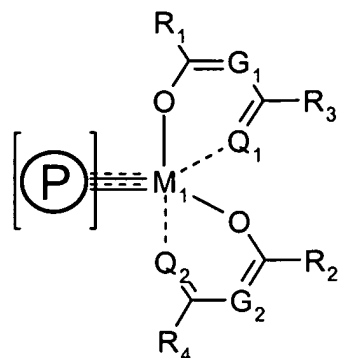


In the claims:

1. **(original)** An optical recording medium comprising a substrate, a recording layer and optionally one or more reflecting layers, wherein the recording layer comprises a compound of formula



(I) or a tautomeric or mesomeric form thereof,

wherein

$G_1$  and  $G_2$  are each independently of the other  $C(R_5)$  or  $N$ ;

$M_1$  is a lanthanide or transition metal of groups 4 to 10;

$\square$  is a phthalocyanine diradical;

$Q_1$  and  $Q_2$  are each independently of the other O or S,

$R_1$  and  $R_2$  are each independently of the other  $C_1$ - $C_{12}$ alkyl,  $C_3$ - $C_{12}$ cycloalkyl,  $C_2$ - $C_{12}$ alkenyl or  $C_3$ - $C_{12}$ cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_6$ , or  $C_6$ - $C_{10}$ aryl,  $C_1$ - $C_9$ heteroaryl,  $C_7$ - $C_{12}$ aralkyl or  $C_2$ - $C_{12}$ heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_7$ ;

$R_3$  and  $R_4$  are each independently of the other hydrogen, hydroxy,  $S-R_8$ ,  $O-R_8$ ,  $O-CO-R_8$ ,  $OCOOR_8$ ,  $NH_2$ ,  $NH-R_8$ ,  $NR_8R_9$ ,  $NHCOOR_8$ ,  $NR_8COOR_{10}$ ,  $NHCOOR_8$ ,  $NR_8COOR_{10}$ , ureido,  $NR_8-CO-NHR_{10}$ , or  $C_1$ - $C_{12}$ alkyl,  $C_3$ - $C_{12}$ cycloalkyl,  $C_2$ - $C_{12}$ alkenyl or  $C_3$ - $C_{12}$ cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_6$ , or  $C_6$ - $C_{10}$ aryl,  $C_1$ - $C_9$ heteroaryl,  $C_7$ - $C_{12}$ aralkyl or  $C_2$ - $C_{12}$ heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_7$ ;

each  $R_5$ , independently of any other  $R_5$ , is hydrogen, or  $C_1$ - $C_{12}$ alkyl,  $C_3$ - $C_{12}$ cycloalkyl,  $C_2$ - $C_{12}$ alkenyl or  $C_3$ - $C_{12}$ cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_6$ , or  $C_6$ - $C_{10}$ aryl,  $C_1$ - $C_9$ heteroaryl,  $C_7$ - $C_{12}$ aralkyl or  $C_2$ - $C_{12}$ heteroaralkyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_7$ ;

wherein  $R_1$  and  $R_2$ ,  $R_2$  and  $R_3$ ,  $R_3$  and  $R_4$  or  $R_1$  and  $R_4$  can be linked by a bonding member, or two of  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  can each be linked by a bonding member to one of the two other  $R_1$ ,  $R_2$ ,  $R_3$  and  $R_4$  to form pairs, and each bonding member is a direct bond or a bridge O, S or N( $R_8$ ); or

$R_1$  forms with  $R_5$  of  $G_1$  and/or  $R_3$  forms with  $R_5$  of  $G_2$  a saturated, mono- or poly-unsaturated or aromatic 5- or 6-membered ring which may optionally contain 1, 2 or 3 identical or different hetero atoms -O-, -S-, -N= or -N( $R_8$ )-, which ring is unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_7$ ; and/or

$R_2$  forms with  $R_5$  of  $G_1$  and/or  $R_4$  forms with  $R_5$  of  $G_2$  a saturated or mono- or poly-unsaturated 5- or 6-membered ring which may optionally contain 1, 2 or 3 identical or different hetero atoms -O-, -S-, -N= or -N( $R_8$ )-, which ring is unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_6$ ;

$R_6$  is halogen, hydroxy, O- $R_{11}$ , O-CO- $R_{11}$ , oxo, S- $R_{11}$ , thioxo,  $NH_2$ , NH- $R_{11}$ ,  $NR_{11}R_{12}$ ,  $NH_3^+$ ,  $NH_2R_{11}^+$ ,  $NHR_{11}R_{12}^+$ ,  $NR_{11}R_{12}R_{13}^+$ ,  $NR_{11}$ -CO- $R_{13}$ ,  $NR_{11}COOR_{13}$ , cyano, formyl, COO- $R_{11}$ , carboxy, carbamoyl, CONH- $R_{11}$ ,  $CONR_{11}R_{12}$ , ureido, NH-CO-NH- $R_{13}$ ,  $NR_{11}$ -CO-NH- $R_{13}$ , phosphato, P(=O) $R_{11}R_{13}$ , POR $_{11}OR_{13}$ , OPR $_{11}R_{13}$ , OPR $_{11}OR_{13}$ , P(=O) $R_{11}OR_{13}$ , P(=O)OR $_{11}OR_{13}$ , OP(=O) $R_{11}OR_{13}$ , OP(=O)OR $_{11}OR_{13}$ , OPO $_3R_{11}$ , SO $_2R_{11}$ , sulfato, sulfo,  $R_{14}$ , N=N- $R_{14}$ , or C $_1$ -C $_8$ alkoxy or C $_3$ -C $_8$ cycloalkoxy each unsubstituted or mono- or poly-substituted by halogen;

$R_7$ , independently of any other  $R_7$ , is  $R_{15}$ , halogen, nitro, cyano, thioccyano, hydroxy, S- $R_8$ , O- $R_8$ , O-CO- $R_8$ , OCOOR $_8$ ,  $NH_2$ , NH- $R_8$ ,  $NR_8R_9$ , NHCOR $_8$ ,  $NR_8COR_{10}$ , NHCOOR $_8$ ,  $NR_8COOR_{10}$ , ureido,  $NR_8$ -CO-NH- $R_{10}$ ,  $NH_3^+$ ,  $NH_2R_8^+$ ,  $NHR_8R_9^+$ ,  $NR_8R_9R_{10}^+$ , N=N- $R_{15}$ , N=CR $_8R_9$ , N=CR $_{16}R_{17}$ , C( $R_{18}$ )=NR $_8$ , C( $R_{18}$ )=NR $_{16}$ , C( $R_{18}$ )=CR $_{16}R_{17}$ , CHO, CHOR $_8OR_{10}$ , COR $_9$ , CR $_9OR_8OR_{10}$ , CONH $_2$ , CONHR $_8$ ,  $CONR_8R_9$ , SO $_2R_8$ , SO $_3R_8$ , SO $_2NH_2$ , SO $_2NHR_8$ , SO $_2NR_8R_9$ , COOH, COOR $_8$ , B(OH) $_2$ , B(OH)(OR $_8$ ), B(OR $_8$ )OR $_{10}$ , phosphato, P(=O) $R_8R_{10}$ , POR $_8OR_{10}$ , P(=O) $R_8OR_{10}$ , P(=O)OR $_8OR_{10}$ , OPR $_8R_{10}$ , OPR $_8OR_{10}$ , OP(=O) $R_8OR_{10}$ , OP(=O)OR $_8OR_{10}$ , OPO $_3R_8$ , sulfato, sulfo, or C $_1$ -C $_5$ alkyl, C $_3$ -C $_6$ cycloalkyl, C $_1$ -C $_5$ alkylthio, C $_3$ -C $_6$ cycloalkylthio, C $_1$ -C $_5$ alkoxy or C $_3$ -C $_6$ cycloalkoxy each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_6$ ;

$R_8$ ,  $R_9$  and  $R_{10}$  are each independently of the others  $R_{15}$ ,  $R_{19}$ -[O-C $_1$ -C $_4$ alkylene] $_m$ ,  $R_{19}$ -[NH-C $_1$ -C $_4$ alkylene] $_m$ , or C $_1$ -C $_8$ alkyl, C $_3$ -C $_8$ cycloalkyl, C $_2$ -C $_8$ alkenyl or C $_3$ -C $_8$ cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C $_1$ -C $_5$ alkoxy or C $_3$ -C $_6$ cycloalkoxy radicals; or

R<sub>8</sub> and R<sub>9</sub> together with the common nitrogen are pyrrolidine, piperidine, piperazine or morpholine, each of which is unsubstituted or mono- to tetra-substituted by C<sub>1</sub>-C<sub>4</sub>alkyl; or

R<sub>8</sub> and R<sub>10</sub> together are C<sub>2</sub>-C<sub>8</sub>alkylene, C<sub>3</sub>-C<sub>8</sub>cycloalkylene, C<sub>2</sub>-C<sub>8</sub>alkenylene or C<sub>3</sub>-C<sub>8</sub>cycloalkenylene, each of which is unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C<sub>1</sub>-C<sub>5</sub>alkoxy or C<sub>3</sub>-C<sub>6</sub>cycloalkoxy radicals;

R<sub>11</sub>, R<sub>12</sub> and R<sub>13</sub> are each independently of the others C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>3</sub>-C<sub>8</sub>cycloalkyl, C<sub>2</sub>-C<sub>8</sub>alkenyl, C<sub>3</sub>-C<sub>8</sub>cycloalkenyl, R<sub>19</sub>-[O-C<sub>1</sub>-C<sub>4</sub>alkylene]<sub>m</sub>, R<sub>19</sub>-[NH-C<sub>1</sub>-C<sub>4</sub>alkylene]<sub>m</sub>, C<sub>6</sub>-C<sub>10</sub>aryl, C<sub>4</sub>-C<sub>9</sub>heteroaryl, C<sub>7</sub>-C<sub>10</sub>aralkyl or C<sub>5</sub>-C<sub>9</sub>heteroaralkyl; or

R<sub>11</sub> and R<sub>12</sub> together with the common nitrogen are pyrrolidine, piperidine, piperazine or morpholine, each of which is unsubstituted or mono- to tetra-substituted by C<sub>1</sub>-C<sub>4</sub>alkyl;

R<sub>14</sub> is C<sub>6</sub>-C<sub>12</sub>aryl, C<sub>4</sub>-C<sub>12</sub>heteroaryl, C<sub>7</sub>-C<sub>12</sub>aralkyl or C<sub>5</sub>-C<sub>12</sub>heteroaralkyl, each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals R<sub>7</sub>;

R<sub>15</sub> is phenyl, C<sub>4</sub>-C<sub>5</sub>heteroaryl, C<sub>7</sub>-C<sub>8</sub>aralkyl or C<sub>5</sub>-C<sub>7</sub>heteroaralkyl, each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals R<sub>20</sub>;

R<sub>16</sub> and R<sub>17</sub> are each independently of the other NR<sub>11</sub>R<sub>12</sub>, CN, CONH<sub>2</sub>, CONHR<sub>8</sub>, CONR<sub>8</sub>R<sub>9</sub> or COOR<sub>9</sub>;

R<sub>18</sub> is R<sub>15</sub>, hydrogen, cyano, hydroxy, C<sub>1</sub>-C<sub>12</sub>alkoxy, C<sub>3</sub>-C<sub>12</sub>cycloalkoxy, C<sub>1</sub>-C<sub>12</sub>alkylthio, C<sub>3</sub>-C<sub>12</sub>cycloalkylthio, amino, NHR<sub>13</sub>, NR<sub>11</sub>R<sub>12</sub>, halogen, nitro, formyl, COO-R<sub>11</sub>, carboxy, carbamoyl, CONH-R<sub>11</sub>, CONR<sub>11</sub>R<sub>12</sub>, or C<sub>1</sub>-C<sub>8</sub>alkyl, C<sub>3</sub>-C<sub>8</sub>cycloalkyl, C<sub>2</sub>-C<sub>8</sub>alkenyl or C<sub>3</sub>-C<sub>8</sub>cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C<sub>1</sub>-C<sub>5</sub>alkoxy or C<sub>3</sub>-C<sub>6</sub>cycloalkoxy radicals; or

R<sub>8</sub> and R<sub>18</sub> together are C<sub>2</sub>-C<sub>8</sub>alkylene, C<sub>3</sub>-C<sub>8</sub>cycloalkylene, C<sub>2</sub>-C<sub>8</sub>alkenylene or C<sub>3</sub>-C<sub>8</sub>cycloalkenylene, each of which is unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy, C<sub>1</sub>-C<sub>5</sub>alkoxy or C<sub>3</sub>-C<sub>6</sub>cycloalkoxy radicals;

R<sub>19</sub> is hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl or C<sub>1</sub>-C<sub>3</sub>alkylcarbonyl;

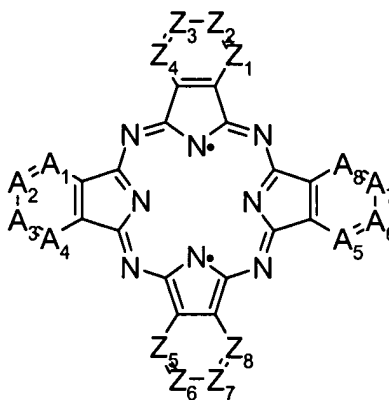
$R_{20}$  is nitro,  $SO_2NHR_{11}$ ,  $SO_2NR_{11}R_{12}$ , or  $C_1$ - $C_8$ alkyl,  $C_3$ - $C_8$ cycloalkyl,  $C_1$ - $C_8$ alkylthio,  $C_3$ - $C_8$ cycloalkylthio,  $C_1$ - $C_8$ alkoxy or  $C_3$ - $C_8$ cycloalkoxy each unsubstituted or substituted by one or more, where applicable identical or different, halogen, hydroxy,  $C_1$ - $C_5$ alkoxy or  $C_3$ - $C_6$ cycloalkoxy radicals;

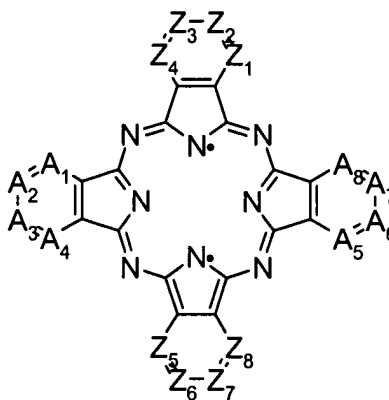
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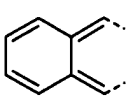
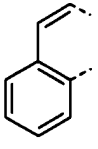
$m$  is a number from 1 to 4.

2. **(previously presented)** An optical recording medium according to claim 1, wherein  $G_1$  and  $G_2$  are each independently of the other  $C(R_5)$ ;

$M_1$  is a lanthanide or transition metal of groups 4 to 7;



□ is a phthalocyanino diradical of formula , wherein  $A_1$  to  $A_8$  and  $Z_1$  to  $Z_8$  are all independently of one another N or  $CR_{24}$ , and each  $R_{24}$  independently of the other  $R_{24}$  is H or

$R_7$ ; or two adjacent  $R_{24}$  together are 1,4-buta-1,3-dienylene,  or , each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_7$  and wherein 1 or 2 carbon(s) may have been replaced by nitrogen; and

$Q_1$  and  $Q_2$  are O;

$R_3$  and  $R_4$  are each independently of the other hydrogen, hydroxy,  $S-R_8$ ,  $O-R_8$ ,  $NH_2$ ,  $NH-R_8$ ,  $NR_8R_9$ ;  $C_1$ - $C_8$ alkyl,  $C_3$ - $C_8$ cycloalkyl,  $C_2$ - $C_8$ alkenyl or  $C_3$ - $C_8$ cycloalkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_6$ ; or  $C_6$ - $C_{10}$ aryl or  $C_1$ - $C_9$ heteroaryl each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_7$ ;

$R_5$  is hydrogen or forms a 5- or 6-membered ring with  $R_1$  or  $R_2$ ;

$R_6$  is halogen, hydroxy,  $O-R_{11}$ ,  $O-CO-R_{11}$ , oxo,  $NH_2$ ,  $NH-R_{11}$ ,  $NR_{11}R_{12}$ , or  $C_1-C_4$ alkoxy unsubstituted or mono- or poly-substituted by halogen;

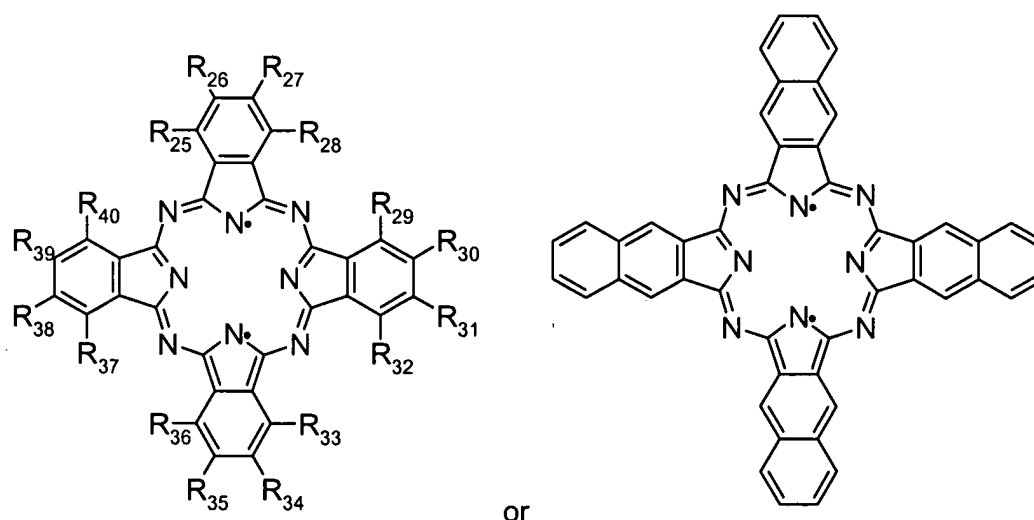
and

$R_7$  is halogen, nitro, cyano, thiocyno,  $S-R_8$ ,  $O-R_8$ ,  $NH_2$ ,  $NH-R_8$ ,  $NR_8R_9$ ,  $NHCOR_8$ ,  $N=CR_8R_9$ ,  $N=CR_{16}R_{17}$ ,  $CHO$ ,  $CHOR_8OR_{10}$ ,  $COR_9$ ,  $CONR_8R_9$ ,  $SO_2R_8$ ,  $COOR_8$ , or  $C_1-C_5$ alkyl or  $C_1-C_5$ alkoxy each unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_8$ .

3. (previously presented) An optical recording medium according to claim 1, wherein  $G_1$  and  $G_2$  are each independently of the other  $C(R_5)$ ;

$M_1$  is Ti, Zr or Hf;

$\square$  is a phthalocyanino diradical of formula



wherein  $R_{25}$  to  $R_{40}$  are all independently of one another H, halogen,  $O-R_8$ ,  $S-R_8$ ,  $O-CO-R_8$ ,  $NH-R_8$ ,  $NR_8R_9$ ,  $CH_2OR_{11}$ ,  $CH_2NR_{11}R_{12}$ ,  $C(R_{18})=CR_{16}R_{17}$ ,  $CHO$ ,  $CHOR_8OR_{10}$ ,  $C(R_{18})=NR_8$ ,  $COR_9$ ,  $CR_9OR_8OR_{10}$ ,  $CN$ ,  $COOH$ ,  $COOR_8$ ,  $CONH_2$ ,  $CONHR_8$ ,  $CONR_8R_9$ ,  $SO_2R_8$ ,  $SO_2NH_2$ ,  $SO_2NHR_8$ ,  $SO_2NR_8R_9$ ,  $SO_3R_8$ ,  $SiR_8R_9R_{10}$ ,  $POR_8OR_{10}$ ,  $P(=O)R_8R_{10}$ ,  $P(=O)R_8OR_{10}$ ,  $P(=O)OR_8OR_{10}$ ,  $P(=O)(NH_2)_2$ ,  $P(=O)(NHR_8)_2$ ,  $P(=O)(NR_8R_9)_2$ ,  $OPR_8R_{10}$ ,  $OPR_8OR_{10}$ ,  $OP(=O)R_8OR_{10}$ ,  $OP(=O)OR_8OR_{10}$  or  $OPO_3R_8$ , more especially H, halogen,  $O-R_8$ ,  $O-CO-R_8$ ,  $NH-R_8$ ,  $NR_8R_9$ ,  $CH_2OR_{11}$  or  $CH_2NR_{11}R_{12}$ ; and also

$Q_1$  and  $Q_2$  are O;

$R_1$  and  $R_2$  are each independently of the other  $C_1-C_5$ alkyl or  $C_2-C_5$ alkenyl, each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_6$ , or phenyl or  $C_2-C_5$ heteroaryl, each of which is unsubstituted or substituted by one or more, where applicable identical or different, radicals  $R_7$ ;

R<sub>3</sub> and R<sub>4</sub> are each independently of the other hydrogen, hydroxy, S-R<sub>8</sub>, O-R<sub>8</sub>, NH<sub>2</sub>, NH-R<sub>8</sub>, NR<sub>8</sub>R<sub>9</sub>, or C<sub>1</sub>-C<sub>5</sub>alkyl or C<sub>2</sub>-C<sub>5</sub>alkenyl each unsubstituted or substituted by one or more, where applicable identical or different, radicals R<sub>6</sub>, or phenyl unsubstituted or substituted by one or more, where applicable identical or different, radicals R<sub>7</sub>;

R<sub>5</sub> is hydrogen or forms a 5- or 6-membered ring with R<sub>1</sub> or R<sub>2</sub>;

R<sub>6</sub> is halogen, hydroxy, O-R<sub>11</sub>, oxo, NH<sub>2</sub>, NH-R<sub>11</sub> or NR<sub>11</sub>R<sub>12</sub>;

and

R<sub>7</sub> is halogen, nitro, cyano, O-R<sub>8</sub>, NH-R<sub>8</sub>, NR<sub>8</sub>R<sub>9</sub>, CHO, CHOR<sub>8</sub>OR<sub>10</sub>, COR<sub>9</sub>, CONR<sub>8</sub>R<sub>9</sub>, SO<sub>2</sub>R<sub>8</sub>, COOR<sub>8</sub>, or C<sub>1</sub>-C<sub>5</sub>alkyl or C<sub>1</sub>-C<sub>5</sub>alkoxy each unsubstituted or substituted by one or more, where applicable identical or different, radicals R<sub>6</sub>.

4. **(previously presented)** An optical recording medium according to claim 1, wherein the compound of formula (I) contains branched C<sub>3</sub>-C<sub>12</sub>alkyl or branched C<sub>3</sub>-C<sub>12</sub>alkenyl.

5. **(previously presented)** An optical recording medium according to claim 1, wherein the recording layer is substantially amorphous.

6. **(previously presented)** An optical recording medium according to claim 1, additionally comprising a covering layer, wherein substrate, reflector layer, recording layer and covering layer are arranged in that order.

7. **(previously presented)** An optical recording medium according to claim 1, which in addition to comprising a compound of formula (I) comprises a metal-free chromophore.

8. **(previously presented)** An optical recording medium according to claim 1, wherein the compound of formula (I) is substantially amorphous.

9. **(previously presented)** A method of producing an optical recording medium according to claim 1, wherein a solution of a compound of formula (I) according to claim 1 is applied by spin-coating to a grooved substrate.

10. **(previously presented)** A method of recording or playing back data, wherein the data on an optical recording medium according to claim 1, are recorded or played back at a wavelength of from 350 to 500 nm.
11. **(previously presented)** An optical recording medium according to claim 2, wherein  $M_1$  is Ti, Zr or Hf.
12. **(previously presented)** An optical recording medium according to claim 11, wherein  $M_1$  is Zr.
13. **(cancelled)**
14. **(currently amended)** An optical recording medium according to claim ~~[[13]]~~ 3, wherein  $M_1$  is Zr.